Wiki 3

**Human Performance Technology and Resistance**

The Human Performance Technology (or HPT) can be applied not in the fields of information, since the information portion has clear expectations, relevant feedback and performance coaching set into the assessments (Chevalier, 2007). Neither are the motives of adjuncts, lead faculty and administration need to be aligned with work or a desire to perform. Capacity of the instructors to team and do what is needed is not in question either. The assessment process “is that individual performance in an organization is always a function of these five components. Therefore, individual performance is a function of 1) Performance Specification, 2) Task interference, 3) Consequences, 4) Feedback, 5) Knowledge and Skill, and 6) Individual capacity” as stated by Stolovitch and Keeps (1999). In comparison the Walden’s Center for Undergraduate Studies (CUGS) uses the Deep C Model as described below:

* **Discovery: Students will locate and identify appropriate sources of information using multiple sources and methods, including bibliographic, textual, experiential, and experimental research.**
* **Evaluation: Students will critically assess texts and arguments in multiple forms and contexts using quantitative and qualitative logic, the scientific method, ethics, and pragmatics.**
* **Expression: Students will effectively and ethically communicate information and opinions verbally and nonverbally using written, oral, behavioral, and visual methods adapted for diverse audiences and purposes.**
* **Perspective: Students will be able to articulate the consistency and flexibility of knowledge as it is experienced across time, space, and culture.**
* **Change: Students will articulate how their ability to discover, evaluate, and express ideas from different perspectives is instrumental in their progress toward achieving personal goals and effecting social change.**

(Jorissen & Mathieu & Middlebrook & Paulson, 2009)

The area that the HPT model will affect will be the factors of Resources and Incentives. Resources will need to be redefined in materials and tools, time and processes. Incentives might also be enriched. This would be less time for all involved in the communication process. An extra incentive would be the intangible benefit of increasing expectations and therefore a better alignment of skill sets need to enhance the student’s experience at the university. As Stolovitch and Keeps stated (1999), “Human Performance Technology can be viewed as a field of endeavor that serves to bring about changes to a system, and in such a way that the system is improved in terms of the achievements it values” and the university values its students.

As a change agent, resistance to voicing an opinion is envisioned, on the way that faculty assessments are taken via Excel. Some administrators had e-mailed but are reluctant to voice any disagreement in the online discussion boards, about changing the methods of delivery. A few adjunct faculty look at this as a controversial issue. It is better to not say anything rather than risk a misrepresentation occurring. Instructors do not want to be seen voicing that the university’s methods might not be perfect. I was prepared and cautioned, from an e-mail, to be careful on how to word any correspondence on the issue, especially in the message boards. I am still trying to overcome this resistance and will try a survey monkey. This approach would be less public and faculty/lead faculty might feel freer to voice concern in a private arena.

The existing power structure, especially the higher echelons, are willing to “identify specific knowledge and skill deficiencies” in the method of assessment of the faculty.(Chevalier, 2007) The information has clear expectations, relevant feedback and performance coaching set into the assessments.(Chevalier, 2007). The resistance appears to be a misunderstanding on the part of adjunct instructors, faculty and lead faculty that I wish to revise the information with the assessment. I need to be concise on the process to initiate a buy-in. it is the improvement of the environment by becoming more cost efficient and time effective. It is not a re-vamping of the assessment material, which appears to be adequate. It is a changing of the environment with more rapid feedback and instruction to aid the instructors with a listing of expectations. (Chevalier, 2007) Since I am not in direct contact with most adjunct faculty, I will do phone interviews with several lead faculty and directors. I will need to be very specific to align any fears and to state my intentions as trying to improve the process so that all can benefit from a quicker delivery of assessments. This in turn will produce a cost savings to the university.

**Shift to Performance-based Assessments**

The shift to performance-based assessment will try to alleviate any bias for the solution (Rossett, 2008), but since I do derive my education and experience from involvement with computers. I will lean towards an information technology solution. I know this bias will occur but I also believe it will provide a permanent and effective solution. I do have several cost effective methods as well as some extremely expensive techniques.

**Proposed Intervention Strategies**

**Lowest Priced Strategy**

The most economical strategy would be to list the faculty assessment on Survey Monkey. Survey Monkey is free and easy to create questions. The instructors could be e-mailed the Survey Monkey Link via one group e-mail. The instructor would then rank their performance with adjoining comment boxes back to the lead faculty. The lead faculty could then scrutinize the submissions online. The lead administration could then embed any remarks or comments in an e-mail back to the instructor with the original survey results. This may be the faster and economical modus but it has pitfalls. There is no ability to do statistical analysis from the perspective of the university. The results of the survey reside on Survey Monkey databases.

The long terms effects of this bargain process are no sustainable tracking of results for each faculty member or for the university, in terms of retention of adequate instructors. This approach is by all means the basest and would cost zero dollars to the university, since Survey Monkey is free and e-mail is already installed on the university’s servers. This strategy though does not prove to be sustainable for the good of the university. In terms of statistical analysis, the university is unable to collect and evaluate performance, which is based and aligned on the university’s goals set forth to be met for instructors as described above in the Deep C model.

**Intermediate Priced Strategy**

The intermediate strategy might be to cloud compute since this is non-strategic Information Technology procedure; but it is very strategic to assessment in each university’s department.

“The cloud is enabling small, medium, and large businesses to outsource non-strategic IT,” says Andi Mann, research director at Enterprise Management Associates, a leading IT consulting firm. “Cloud computing gives businesses the opportunity to make their investments in IT more strategic and deliver a better ROI(return on investment).” Most companies’ strategies don’t pivot on email or CRM (customer relationship management), for instance, so why not hand off those tasks to an outside provider. Companies such as Amazon.com, Google, and IBM have figured out how to run “server farms” that are much larger and more efficient than those within most enterprises, and that gives the specialists a big advantage in cost per unit of computing. Google even designs and manufactures its own stripped-down servers and support gear, which it employs by the hundreds of thousands units per year. Even software giant SAP is in on SaaS, offering medium-sized businesses an online version of its market-leading ERP (Enterprise Resource Planning) system.” ( Ganster, 2009)

This project could start minutely with just a spreadsheet and then incorporate e-mail and statistical applications into its cloud. This would not require heavy deployment costs since the major configuration is already built and installed on other companies’ servers. Access is easy because it only requires an Internet connection. “Three major risks that make them (businesses) cautious about moving most or all of their IT operations into the cloud: reliability, security, and compliance.” (Ganster, 2009)

Total cost: $240 for EC2’s SAP server time per month, plus a similarly small amount for having Amazon’s storage service, called S3, store the initial scans and finished results.” (Ganster, 2009)

This cost is small in comparison to one interviewee from the lead faculty, from the Center for Undergraduate Studies is, who stated that about 450 lead faculty members exist in the university and average time can vary depending upon if the assessment is one class or two. Direct Observations observations of faculty would be approximately 1 to 2 hours with total observations on each faculty taking 15 to 20 hours per term. Faculty Observations entail probably 20 hours/term, per the Program Director for General Education, which requires coordination from adjunct and full time faculty to get the assessments completed. This does not include work on Faculty Metrics or reporting for Key Performance Indicators or Instructional Quality Reports, which might entail another 20-30 hours per six-week term. Annual analysis of the assessment data is also included in the Learning Outcomes Report and is not tabulated here.

For tabulation of direct observations and total faulty observations, we can estimate 50 dollars an hour or on the low end of 16 \* 50 or 800 dollars per observer or at the high end of 1100 dollars.

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| --- | --- |
| Low End | High End |
| Assessment Hours  15 +1 = 16 | Assessment Hours  2 + 20 = 22 |
| Total Cost  16 \*50 = 800 | Total Cost  22 \* 50 = 1100 |
| Lead Faculty Cost per 6 week  450 \* 800 = 360,000 | Lead Faculty Cost Per 6 week  450 \* 1100 = 495,000 |
| Lead Faculty Cost per Year  48 sessions \* 360,000= 17,280,000 | Lead Faculty Cost per Year  48 sessions \* 495,000 = 23,760,000 |

*The average cost of the server is $240 + $240 for Amazon storage of a cost of $480 per month or $5760 per year. The costs savings in time, if cloud computing is implemented and cuts response time in half, would be $17,280,000/2 -$5760 or $8,634,240 at the low end.*

**Excessive Priced Strategy**

This strategy would be to incorporate an editable Excel worksheet or table online as a web page using Web 2.0. An editable table would suffice to collect data and the lead faculty member would then be able to edit and return any assessments in a matter of minutes. This online version would be readily available to the instructor upon feedback. If the university housed their own server space, the cost would, per hour, would have several factors:

* Configuration of service facility
  + Number of servers (or channels)
  + Number of phases (or service stops)
* Service distribution
* The time it takes to serve 1 arrival
* Can be fixed or random
* Exponential distribution is often used

Exponential Distribution

μ = average service time

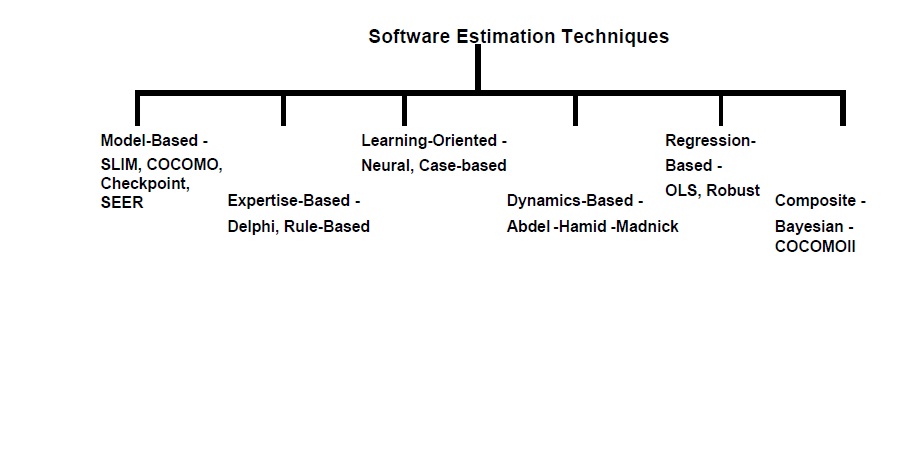
t = the length of service time (t > 0)

P(t) = probability that service time will be greater than t

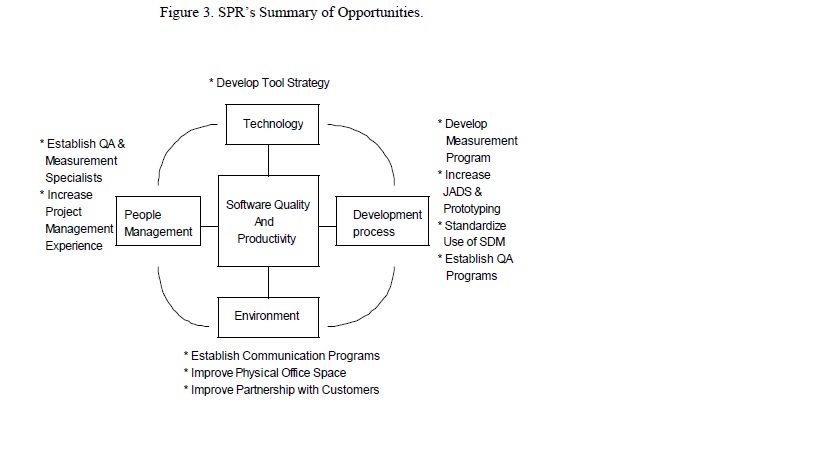
P(t) = e- μt

(Anvari, 2009)

Needless to say, calculating development time on a server is complicated. In an enterprise situation, it is not unusual to encompass over 50,000 dollars just on server time for development and testing.

This project would be proprietary software development to be utilized by only the university. Several techniques or methods are used to estimation software costs. I chose Checkpoint.

“Checkpoint is a knowledge-based software project estimating tool from Software Productivity Research (SPR) developed from Capers Jones’ studies [Jones 1997]. It has a proprietary database of about 8000 software projects and it focuses on four areas that need to be managed to improve software quality and productivity. It uses Function Points (or Feature Points) [Albrecht 1979; Symons 1991] as its primary input of size. SPR’s Summary of Opportunities for software development is shown in figure 3. QA stands for Quality Assurance; JAD for Joint Application Development; SDM for Software Development Metrics. It focuses on three main capabilities for supporting the entire software development life-cycle” as depicted below:



(Boehm & Abts & Chulani, 2000)

The project would focus on JAD since some departments use different methods for assessment and the ability to get a buy-in from all stakeholders would be relevant. This would entail the most time for a developer and getting the buy-in from all involved. Even employing one software developer at approximately 100 hours for JAD at 300 dollars would exceed 30,000 dollars. The SDM or RAD (Rapid applications development) would only entail 40 hours. Development only incurs cost when you need to continue to revise screens because you do not have the buy in from all stakeholders.

Since this is Proprietary software maintenance would also be a recurring cost and make this strategy far above the financial means of the university and not produce a Return on Investment. It would be a financial burden. The first method would be sufficient but would not produce any benefits from an ever increasing staff. Therefore, choice two of Cloud computing would be the best choice for a university, that is ever increasing in student body and faculty. It would be cost savings and a time saver for staff, predominantly the lead faculty.

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